

LAND APPLICATION SITE

CARL V SHELL SITE

DWCVS 1-3

DINWIDDIE COUNTY

RECYC SYSTEMS, INC

PART D-VI BIOSOLIDS APPLICATION AGREEMENT

This biosolids application agreement is made on 5-22-09 between Carl V Shell & Judy T Shell referred to here as "landowner", and Recyc Systems, Inc, referred to here as the "Permittee"

Landowner is the owner of agricultural land shown on the map attached as Exhibit A and designated there as _____ ("landowner's land") Permittee agrees to apply and landowner agrees to comply with certain permit requirements following application of biosolids on landowner's land in amounts and in a manner authorized by (VPA) (VPDES) permit number _____ which is held by the Permittee

Landowner acknowledges that the appropriate application of biosolids will be beneficial in providing fertilizer and soil conditioning to the property and consents to the application of biosolids on his property Moreover, landowner acknowledges having been expressly advised that, in order to protect public health

1 Public access to landowner's land upon which biosolids have been applied should be controlled for at least 30 days following any application of biosolids and no biosolids amended soil shall be excavated or removed from the site during this same period of time unless adequate provisions are made to prevent public exposure to soil, dusts or aerosols,

2 Food crops with harvested parts that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after the application of biosolids Food crops with harvested parts below the surface of the land shall not be harvested for 20 months after the application of biosolids when the biosolids remain on the land surface for a time period of four (4) or more months prior to incorporation into the soil, or 38 months when the biosolids remain on the land surface for a time period of less than four (4) months prior to incorporation Other food crops, feed crops and fiber crops shall not be harvested for 30 days after the application of biosolids,

3 Following biosolids application to pasture or hayland sites, meat producing livestock should not be grazed or fed chopped foliage for 30 days and lactating dairy animals should be similarly restricted for a minimum of 60 days Other animals should be restricted from grazing for 30 days,

4 Supplemental commercial fertilizer or manure applications should be coordinated with the biosolids applications such that the total crop needs for nutrients are not exceeded as identified in the nutrient management plan developed by a person certified in accordance with §10 1-104 2 of the Code of Virginia to be supplied to the landowner by the permittee at the time of application of biosolids to a specific permitted site,

5 Tobacco, because it has been shown to accumulate cadmium, should not be grown on landowner's land for three years following the application of biosolids borne cadmium equal to or exceeding 0.45 pounds/acre (0.5 kilograms/hectare)

6 Turf grown on land where biosolids are applied shall not be harvested for one year after application of biosolids when the harvested turf is placed on either land with a high potential for public exposure or a lawn, unless otherwise specified by the permitting authority

The landowner agrees to allow county officials access to the area of the property permitted for biosolids whenever necessary, to complete site inspections related to the scheduled biosolids program

Permittee agrees to notify landowner or landowner designee of the proposed schedule for biosolids application and specifically prior to any particular application to landowner's land This agreement may be terminated by either party upon written notice to the address specified below

Landowner Signature

Carl V. Shell
Judy T. Shell

Mailing Address

23028 Dabney M. II Rd
PETERSBURG, VA 23803

Farm Operator Signature

Carl V. Shell

Mailing Address

23028 Dabney M. II Rd
PETERSBURG, VA 23803

Permittee

Recyc Systems, Inc

Mailing Address

P O Box 562
Remington Virginia 22734
(540) 547-3300

Carl V Shell Site

[illegible]

RECYC SYSTEMS, INC

FIELD DATA SHEET

Field Identification	Gross Acres	Environmentally Sensitive Soils				Hydro Map	Tax Map #	FSA Tract #
		Water Table	Bed Rock/Shallow	Surf/Leach	Freq Flood			
DWCVS11	70 6	12A,12B,17A,17B	-	-	-	CU27	TM46-1 P1,2,3,4,9,10	6040
DWCVS2	21 7	-	-	19B	-	CU27	TM47,P21	1558
DWCVS3	26 6	12B	-	-	-	CU27	TM47,P15,15A	1558
TOTAL ACRES IN SITE	118 9							

Report Number 09-337-0524

Account Number 70594

**A&L Eastern Laboratories, Inc**

7621 Whitepine Road Richmond Virginia 23237 (804) 743-9401 Fax (804) 271-6446

Send To RECYC SYSTEMS INC
SUSAN TRUMBO
8455 WHITESHOP RD
CULPEPER VA 22701

Grower

CARL SHELL
DINWIDDIE - DWCVS

Submitted By J B CRENSHAW
Farm ID

SOIL ANALYSIS REPORT

Date Received 12/03/2009

Date Of Analysis 12/04/2009

Date Of Report 12/07/2009

Analytical Method(s)

MEHLICH 3

Sample ID Field ID	Lab Number	Organic Matter			Phosphorus		Potassium		Magnesium		Calcium		Sodium		pH		Acidity		C-E-C	
		%	Rate	ENR lbs/A	Mehlich-3 ppm	Reserve Rate	K ppm	Rate	Mg ppm	Rate	Ca ppm	Rate	Na ppm	Rate	Soil pH	Buffer Index	H meq/100g		meq/100g	
1	12245	3.9	M	12.124	7	VL	39	VL	31	L	148	VL			4.5	6.78	1.5		26	
2	12246	2.9	M	10.105	6	VL	40	VL	34	H	166	L			5.2	6.87	0.6		18	
3	12247	3.8	M	12.123	7	VL	38	VL	30	M	153	L			4.6	6.80	1.3		24	

Sample ID Field ID	Percent Base Saturation					Nitrate		Sulfur		Zinc		Manganese		Iron		Copper		Boron		Soluble Salts		Chloride		Aluminum	
	K %	Mg %	Ca %	Na %	H %	NO ₃ -N ppm	Rate	S ppm	Rate	Zn ppm	Rate	Mn ppm	Rate	Fe ppm	Rate	Cu ppm	Rate	B ppm	Rate	ms/cm Rate	SS Rate	Cl ppm	Rate	Al ppm	Rate
1	38	99	28.5		58.5																				
2	57	157	46.1		35.0																				
3	41	104	31.9		55.3																				

Values on this report represent the plant available nutrients in the soil. Rating after each value: VL (Very Low) L (Low) M (Medium) H (High) VH (Very High) ENR - Estimated Nitrogen Release C-E-C - Cation Exchange Capacity

Explanation of symbols: % (percent) ppm (parts per million) lbs/A (pounds per acre) ms/cm (milli-mhos per centimeter) meq/100g (milli-equivalent per 100 grams) Conversions: ppm x 2 = lbs/A Soluble Salts ms/cm x 640 = ppm

This report applies to sample(s) tested. Samples are retained a maximum of thirty days after testing.

Analysis prepared by A&L Eastern Laboratories, Inc.

by

A handwritten signature in black ink, appearing to read 'Oscar Ruiz'.

Oscar Ruiz

Report Number 09-337-0524

Account Number 70594



www.allabs.com

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CARL SHELL
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Submitted By J B CRENSHAW
Farm ID

Date Received 12/03/2009

Date Of Report 12/07/2009

SOIL FERTILITY RECOMMENDATIONS

Sample ID Field ID	Intended Crop	Yield Goal	Lime Tons/A	Nitrogen N lb/A	Phosphate P ₂ O ₅ lb/A	Potash K ₂ O lb/A	Magnesium Mg lb/A	Sulfur S lb/A	Zinc Zn lb/A	Manganese Mn lb/A	Iron Fe lb/A	Copper Cu lb/A	Boron B lb/A
1	Adjust pH to 6.8	0	20				49						
2	Adjust pH to 6.8	0	18				46						
3	Adjust pH to 6.8	0	20				50						

Comments

Crop Adjust pH to 6.8 - Sample(s) 1, 2, 3

Apply dolomitic lime to raise pH and improve the magnesium level

If dolomitic lime is not used apply required magnesium with magnesium oxide Epsom Salts K-Mag or Sul-PO-Mag

Crop Adjust pH to 6.8 - Sample(s) 2, 3

This soil is very sandy and subject to heavy leaching loss of nutrients such as nitrogen, sulfur and boron To minimize loss make sure apply these leachable nutrients close to planting time in the Spring or when plants start to grow Split application if possible

The recommendations are based on research data and experience but NO GUARANTEE or WARRANTY expressed or implied, concerning crop performance is made

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Oscar Ruiz

NUTRIENT MANAGEMENT PLAN IDENTIFICATION

Operator

Carl V. Shell
23028 Dabney Mill Road
Petersburg, VA 23803
804-469-3918

Integrator None

Farm Coordinates

Easting 0, Northing 0, zone 17

Watershed Summary

watershed CU27
county Dinwiddie

Nutrient Management Planner

Recyc Systems, Inc
P O Box 562
Remington, VA 22734
540 547 3300
Certification Code None

Acreage Use Summary

Total Acreage in this plan 118.9

Cropland	11	118.9
Hayland	0	0
Pasture	0	0
Specialty	0	0

Livestock Summary

Beef Cattle	0	0
Dairy Cattle	0	0
Poultry	0	0
Swine	0	0
Other	0	0

Manure Production Balance

	Imported	Produced	Exported	Used	Net
kgais	0	0	0	0	0
tons	0	0	0	0	0

Plan written 12/11/2009

Valid until 12/11/2009

Signature

Planner

date

THE PLANNER IS NOT STATE CERTIFIED

Nutrient Management Plan Balance Sheet
(Spring, 2009-Summer, 2010)
Carl V Shell
Planner: Recyc Systems, Inc

Tract 1558 Location Dinwiddie

(N = N based, 1P = P based, 1 5P = P based at 1 5 removal, 0P = No P allowed)

Field CFSA No /Name	Size (ac) Total/ Used	Yr	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Biosld Rate & Type (season)	IT (d)	Man/Bios N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
1/DWCVS02(N)	22/22	2009 2010	Corn (grain)	140-60-60 140-120-80	0/0 0/0				140-60-60 140-180-140	N/A N/A			
1/DWCVS03(N)	27/27	2009 2010	Corn (grain)	140-60-60 140-120-100	0/0 0/0				140-60-60 140-180-160	N/A N/A			

Commercial Application Methods

br - Broadcast ba - Banded sd - Sidedress

Notes

Tract 6040 Location Dinwiddie
 (N = N based, 1P = P based, 1 5P = P based at 1 5 removal, 0P = No P allowed)

Field CFSA No /Name	Size (ac) Total/ Used	Yr	Crop	Needs N-P-K (lbs/ac)	Leg /Man Resid	Manure/Brosld Rate & Type (season)	IT (d)	Man/Bros N-P-K (lbs/ac)	Net = Needs - appld N-P-K (lbs/ac)	Sum P rem cred	Commercial N-P-K (lbs/ac)	Notes	
211/DWCVS01(N)	71/71	2009 2010	Corn (grain)	140-60-60 140-120-100	0/0 0/0				140-60-60 140-180-160	N/A N/A			

Commercial Application Methods

br - Broadcast ba - Banded sd - Sidedress

Notes

THE PLANNER IS NOT STATE CERTIFIED

Carl V Shell Narrative

The Carl V Shell Farm is located in Dinwiddie County The farm consists of row crops

This partial plan is written for the purpose of obtaining a biosolids permit Biosolids application has not been shown since it is uncertain when a permit will be obtained The partial plan will be revised prior to biosolids application to obtain a target biosolids application rate

Soil Test Summary

Tract	Field	Acre	Date	P2O5	K2O	Lab	Soil pH	Lime Date	rec lime tons/Ac
1558	DWCVS02	22	2009-Fa	L- (6 P ppm)	L+ (40 K ppm)	A&L MIII	5.2		
1558	DWCVS03	27	2009-Fa	L- (7 P ppm)	L (38 K ppm)	A&L MIII	4.6		
6040	DWCVS01	71	2009-Fa	L- (7 P ppm)	L (39 K ppm)	A&L MIII	4.5		

Field Productivities for Major Crops

Tract Name	Tract/ Field	Field Name	Acres	Predominant Soil Series	Corn	Small Grain	Alfalfa	Grass Hay	Environmental Warnings
1558	1558/1	DWCVS02	22	Emporia	IIIa	II	II	II	
	1558/1	DWCVS03	27	Emporia	IIIa	II	II	II	
6040	6040/21	6040/211 DWCVS01	71	Mattaponi	IIIa I	II II	III I	II	

Yield Range

Field Productivity Group	Corn Grain Bu/Acre	Barley/Intensive Wheat Bu/Acre	Std Wheat Bu/Acre	Alfalfa Tons/Acre	Grass/Hay Tons/Acre
I	≥170	≥80	≥64	≥6	≥40
II	150-170	70-80	56-64	4-6	35-40
III	130-150	60-70	48-56	≤4	30-35
IV	100-130	50-60	40-48	NA	≤30
V	≤100	≤50	≤40	NA	NA

Farm Summary Report

Plan New Plan Spring, 2009 - Summer, 2010

Farm Name **Carl V Shell**
Location Dinwiddie
Specialist Recyc Systems, Inc

Tract Name **1558**
FSA Number 1558
Location Dinwiddie

Field Name **DWCVS02**
Total Acres 21 70 Usable Acres 21 70
FSA Number 1
Tract 1558
Location Dinwiddie
Slope Class B Hydrologic Group C

Riparian buffer width 0 ft
Distance to stream 0 ft

P-Index Summary

N-based

Phosphorus Limit method Phosphorus Environmental Threshold (PET) method

Soil Test Results

DATE	PH	P	K		Lab
Fa-2009	5 2	L-(6 P ppm)	L+(40 K ppm)	A&L Mill	

Soils

PERCENT	SYMBOL	SOIL SERIES
6	17B	Slagle
2	19B	Uchee
92	5B	Emporia

Field Warnings

Crop Rotation

PLANTED	YIELD	CROP NAME
2009-Sp	139 8 bushel(s)	Corn (grain) - No Till
2010-Sp	139 8 bushel(s)	Corn (grain) - No Till

Field Name DWCVS03

Total Acres	26 60	Usable Acres	26 60
FSA Number	1		
Tract	1558		
Location	Dinwiddie		
Slope Class	B	Hydrologic Group	C

Riparian buffer width 0 ft

Distance to stream 0 ft

P-Index Summary

N-based

Phosphorus Limit method Phosphorus Environmental Threshold (PET) method

Soil Test Results

DATE	PH	P	K		Lab
Fa-2009	4 6	L-(7 P ppm)	L(38 K ppm)	A&L Mill	

Soils

PERCENT	SYMBOL	SOIL SERIES
86	5B	Emporia
9	12B	Mattaponi
5	14A	Myatt

Field Warnings**Crop Rotation**

PLANTED	YIELD	CROP NAME
2009-Sp	137 0 bushel(s)	Corn (grain) - No Till
2010-Sp	137 0 bushel(s)	Corn (grain) - No Till

Tract Name 6040

FSA Number 6040
Location Dinwiddie

Field Name DWCVS01
Total Acres 70 60 Usable Acres 70 60
FSA Number 211
Tract 6040
Location Dinwiddie
Slope Class B Hydrologic Group C

Riparian buffer width 0 ft
Distance to stream 0 ft

P-Index Summary

N-based
Phosphorus Limit method Phosphorus Environmental Threshold (PET) method

Soil Test Results

DATE	PH	P	K	Lab
Fa-2009	4 8	L(7 P ppm)	L(39 K ppm)	A&L MIII
Fa-2009 4	5 L(-	7 P ppm) L(3	9 K ppm) A&LMII	I

Soils

PERCENT SYMBOL	SOI	SOIL SERIES
1 2	2C Appl	Appling
4 4	4C Ceci	Cecil
2 5	5A Emp	Emporia
20 5	5B Emp	Emporia
58 12	12A Mat	Mataponi
12 12	12B Mat	Mataponi
1 14	14A Mya	Myatt
1 17	17A Sla	Slagle
1 17	17B Sla	Slagle

Field Warnings

Crop Rotation

PLANTED	YIELD	CROP NAME
2009-Sp	138 6 bushel(s)	Corn (grain) - No Till

2010-Sp

138.6 bushel(s)

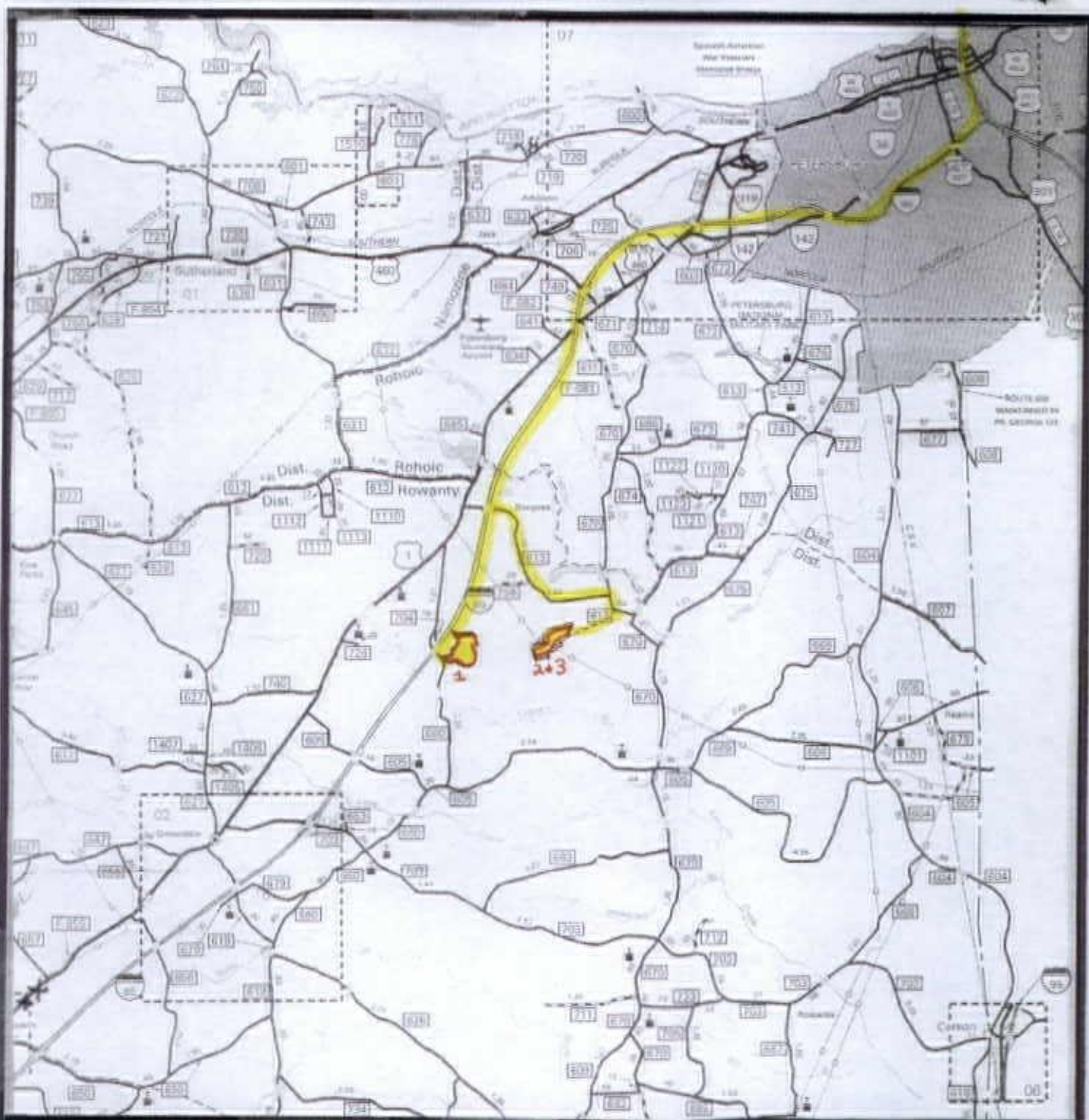
Corn (grain) - No Till



MAPS

Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 2 miles

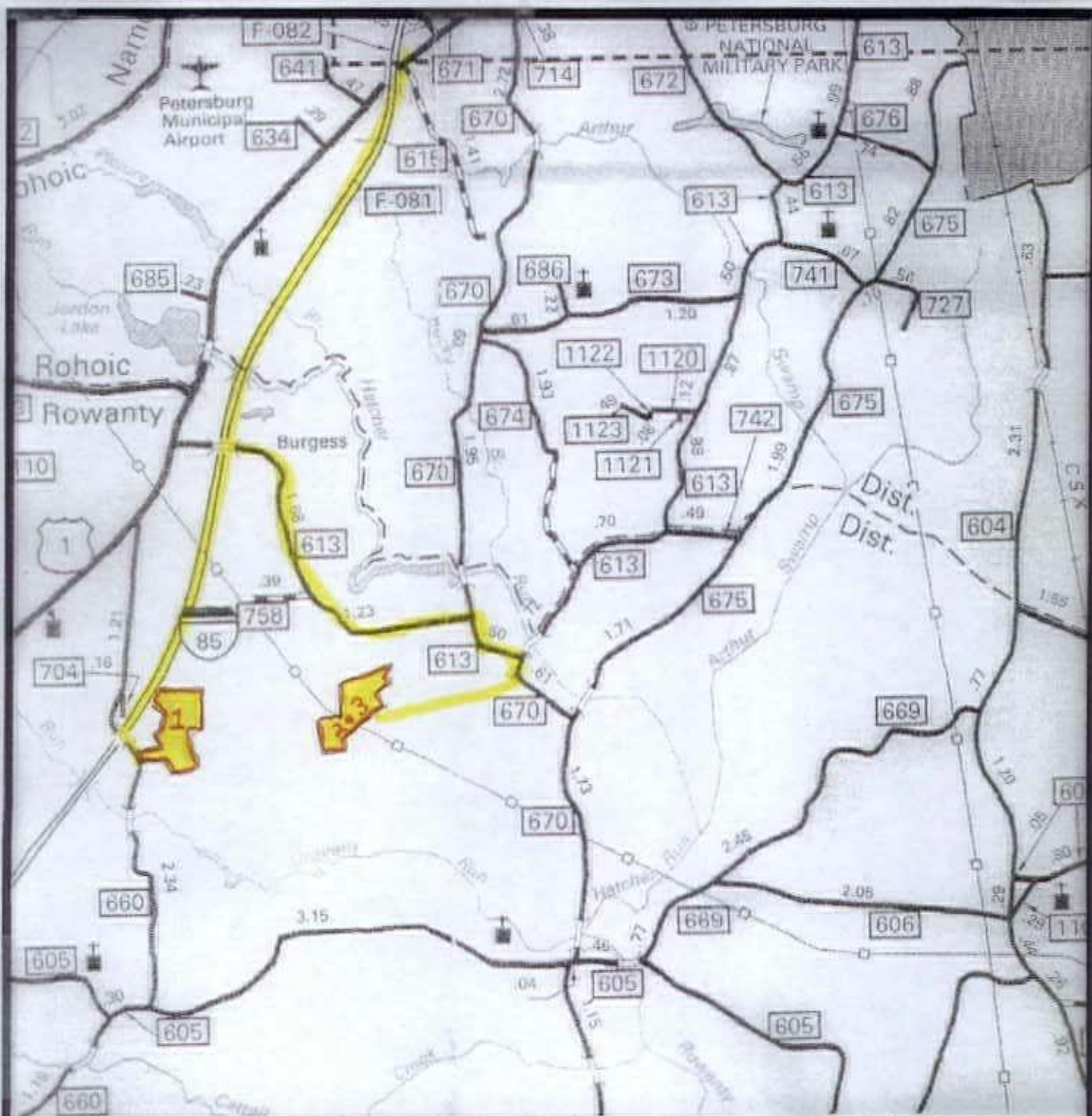
DWCVS 1-3

VICINITY MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 1 mile

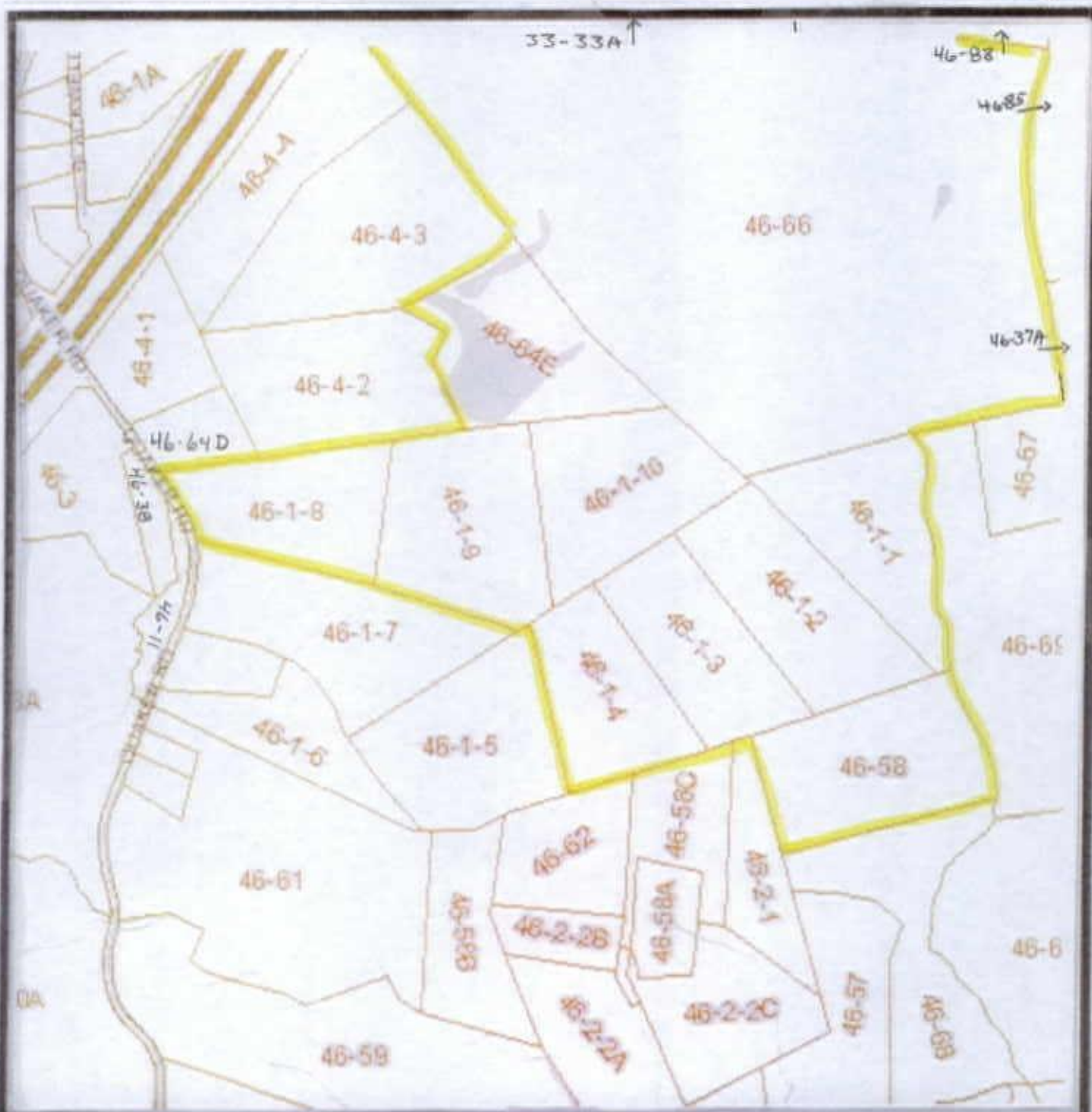
DWCVS 1-3

VICINITY MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)

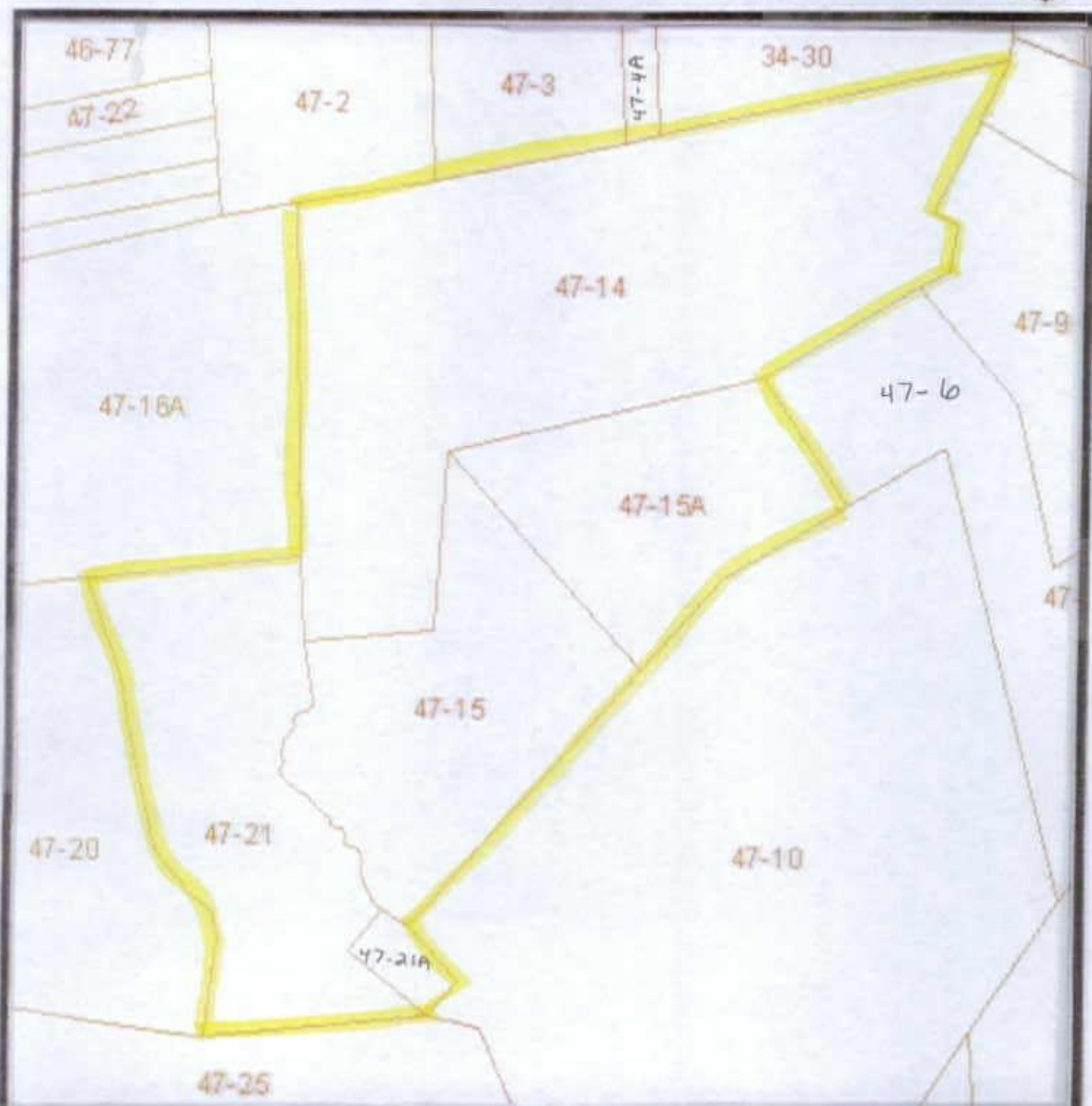


Scale: 1 inch = 660 feet

DWCVS 1

TAX MAP





Scale: 1 inch = 660 feet

DWCVS 2-3

TAX MAP



ADJOINING LANDOWNERS

Carl V. Shell Site

DINWIDDIE COUNTY

Tax Map	Parcel #	Owner Name(s)
33	33A	Carl V. Shell, Jr. & Susan S. Eubank
34	30	W. E. Bishop, Jr et ux
46	1-5	Troy R. Warren
	1-7	Joseph Jackson
	2-1	Geneva W. Nunnally
	3	Carl V. Shell, Jr.
	4-2	James Andrew Lassiter
	4-3	Wilbert Lee or Audrey W. Lassiter
	4-4	John Edward or Shirley A. Lassiter
	11	Nancy Winn Williams & Rebecca Chambers Scanlon
	58C	Jerome & Tonya Henderson
	62	Woody G. Stafford et ux
	64D	James Andrew Lassiter
	67	Inez O. Lyons c/o Anthony Shands
	68	Parthenia H. Franks
	69	Anette O. & Jamille R. Shands
	73A	Jean Shell & Steven O. Phillips
	83	Anthony M. Shands
	85	James Patterson etal
47	2	Association for the Preservation of Civil War Sites, Inc.
	3	Leona I. Hill, etal
	4A	Eliza Bell Ruffin c/o Catherine Ruffin-Boyd
	6	Howard R. Robertson, Jr.
	9	Marion M., Jr. & Carol G. Potter
	10	Nancy Winn Williams & Rebecca Chambers Scanlon
	16A	Jean Shell & Steven O. Phillips
	20	Martha M. & Charles Mitchell Jackson c/o Veronica Dunlap
	25	James C. Coleman c/o Raymond J. Rivers

Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

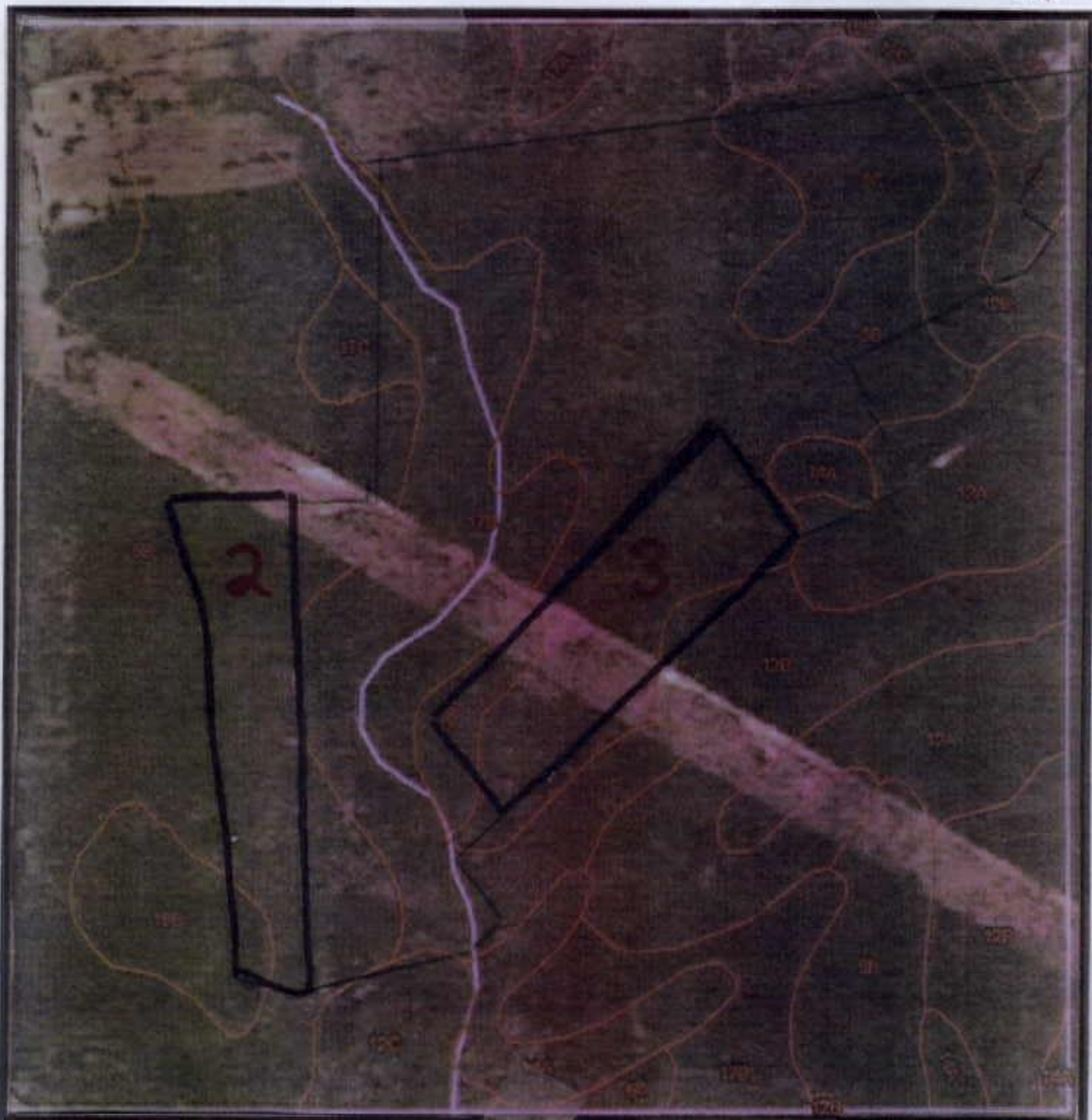
DWCVS 1

SOIL MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

DWCVS 2-3

SOIL MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

DWCVS 1

AERIAL MAP



Recyc SystemsTM Inc.

(Biosolids Land Application)



















Scale: 1 inch = 660 feet

DWCVS 2-3

AERIAL MAP

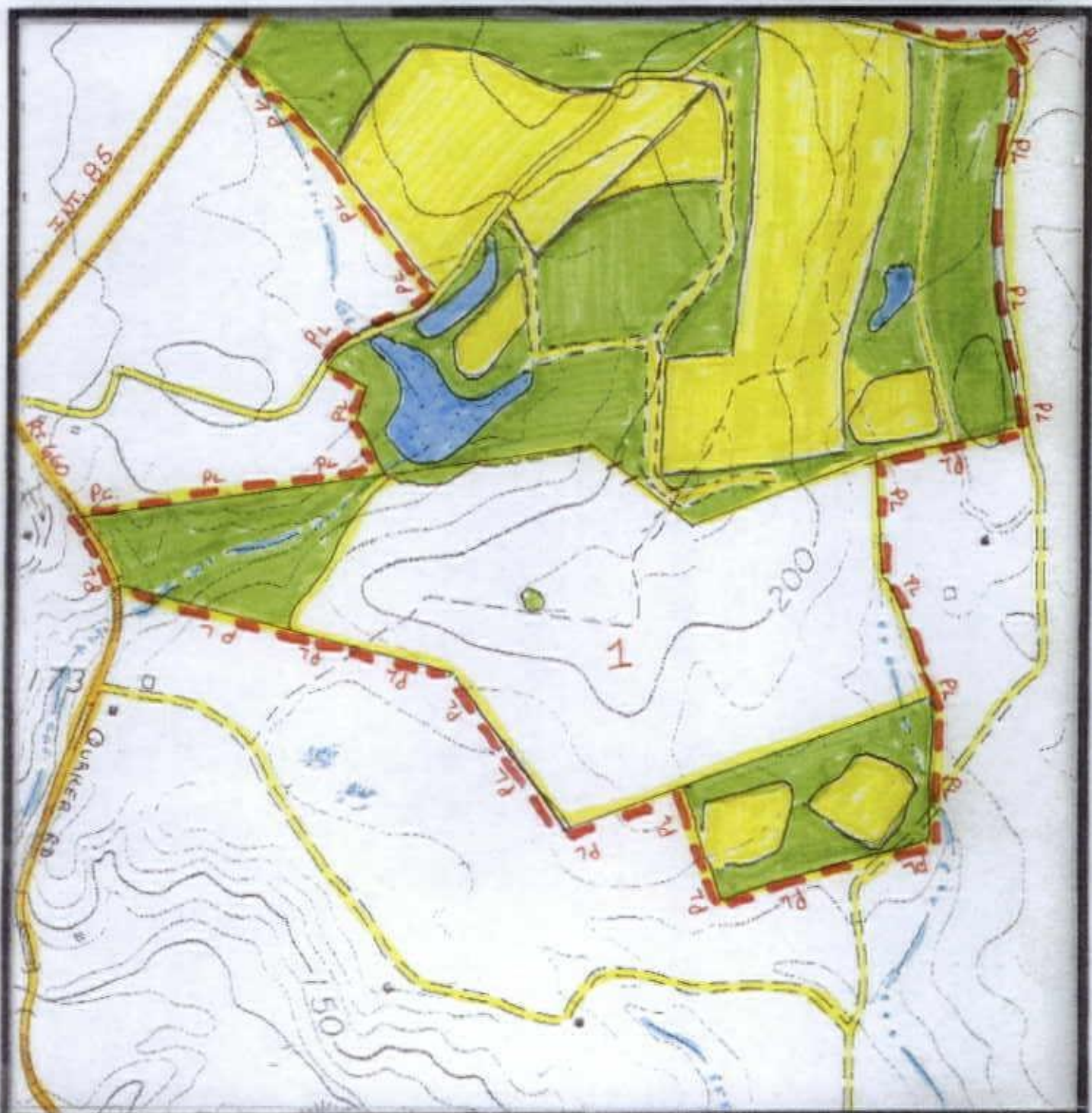


Legend for Site Plan

	House and Well
	Well / Spring
	
	Perennial Streams & Surface
	Wet Spot
	Intermittent Stream / Drainage
	Trees and Woods
	Private Drive
	Rock / Rocky Area
	Sinkhole
	Severely Eroded Spot
	State Road
	Field Boundary / Fence
	Property Line
	Slope
	Frequent Flooded Soil

Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

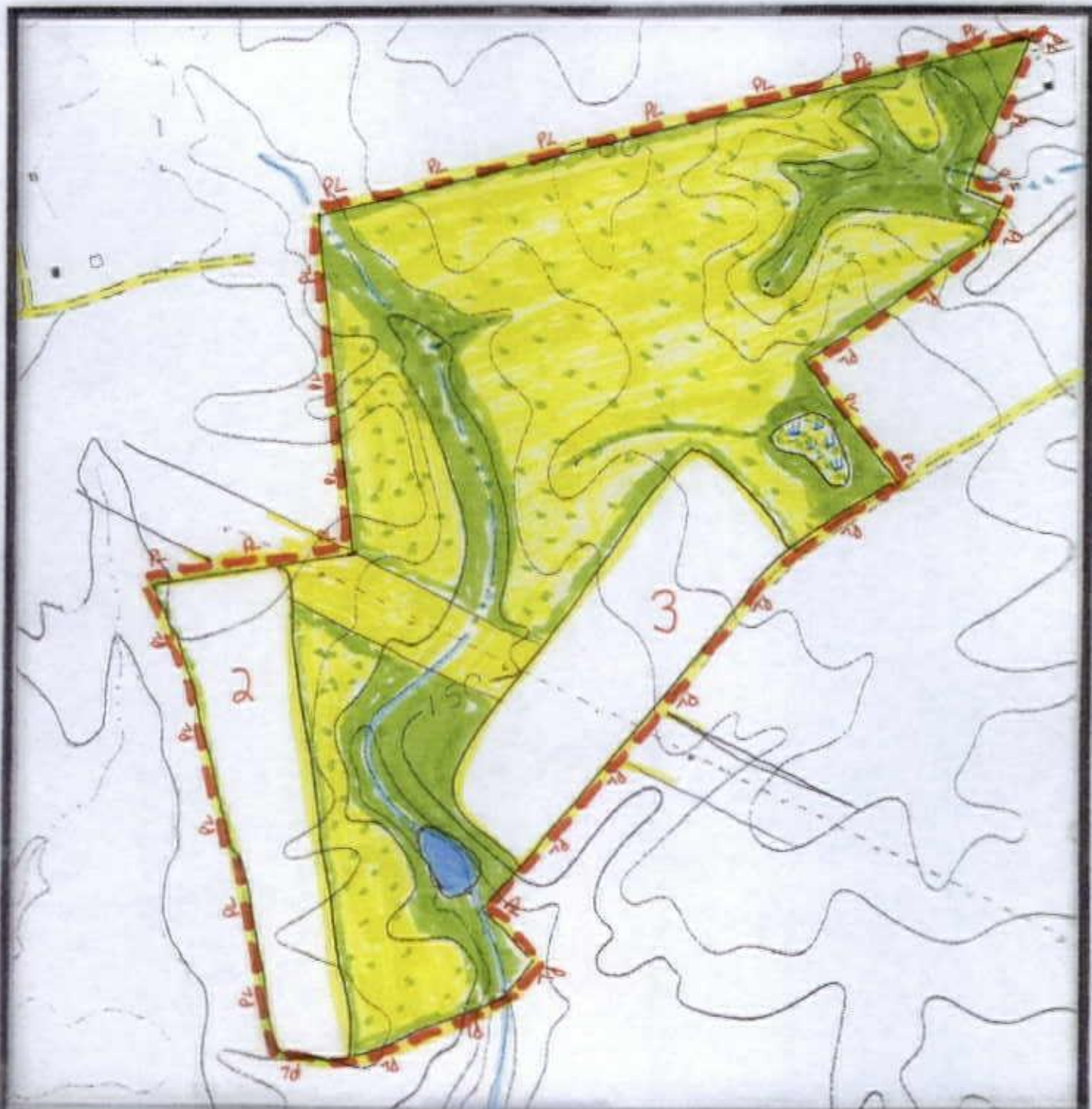
DWCVS 1

SITE PLAN



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 660 feet

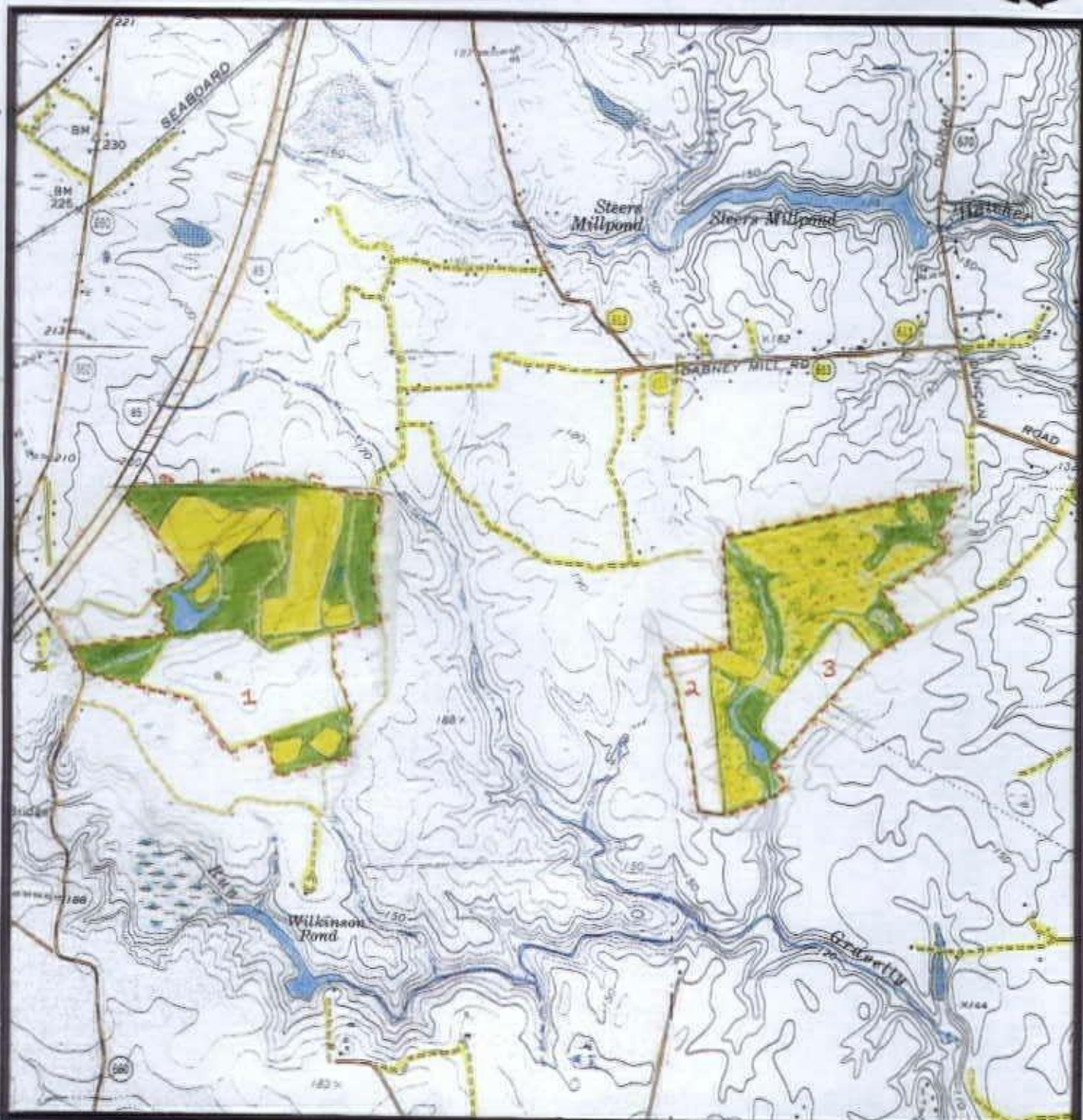
DWCVS 2-3

SITE PLAN



Recyc SystemsTM Inc.

(Biosolids Land Application)



Scale: 1 inch = 2,000 feet

DWCVS 1-3

TOPOGRAPHIC MAP

